

CLAIMS

1. A surface sensing device for use in position
determining apparatus and which includes a hollow stylus
having a workpiece-contacting tip and an optical transducer
5 system, said optical transducer system comprising a light
source for producing a beam of light directed internally of
the stylus towards the tip of the stylus, and a detector
positioned relative to the beam to receive the beam and to
produce a signal indicative of the lateral displacement of
10 the stylus tip.
2. A surface sensing device according to claim 1 wherein
the light source and the detector are mounted to fixed
structure to which the stylus is connected and an optical
component is mounted adjacent the tip of the stylus to
15 return the beam to the detector.
3. A surface sensing device according to claim 2 wherein
the optical component is a retro-reflecting device which is
substantially insensitive to tilting of the stylus tip.
4. A surface sensing device according to claim 1 wherein
20 the stylus forms part of a stylus assembly which comprises
a relatively stiff stylus carrier and a relatively flexible
stylus.
5. A surface sensing device according to claim 4 wherein
the stylus carrier is connected to a housing of the device
25 and the light source and detector are mounted to the
housing.

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